THE TECHNIQUE

OF

VAGINAL FIXATION OF THE STUMP

IN

ABDOMINAL HYSTERECTOMY.

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THE TECHNIQUE OF VAGINAL FIXATION OF THE STUMP IN ABDOMINAL HYSTERECTOMY.

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Encouraged by the success obtained in the treatment of the stump in abdominal hysterectomy by vaginal fixation (twenty cases with one death), I have thought it proper to again present the subject. All new methods suffer from the want of experience of the operators. During the past year I have added a little to my experience with it, and desire that anyone wishing to try it should have the advantage.

With regard to the first three steps as given in last year's communication, viz., ligaturing and severing the broad ligaments, separating the bladder from the uterus, and placing the elastic ligature, guarded by the pedicle pins, I have nothing to add except that I ordinarily begin separating the peritoneum an inch above the attachment of the bladder. As to ligating the stumps in three parts, I sometimes do this and sometimes only ligate the outer thirds or quarters, which contain the large vessels, and place sutures on the pared edges deep enough to act as efficient hæmostatic agents. The latter procedure is sometimes an easier and quicker one in stumps that are dense and not very vascular. The ends of the ligatures are all left about six inches long, as before described. I have not yet seen fit to neglect an efficient ligaturing of the stumps, so as to depend entirely on the clamp.

The elastic ligature is removed and the vagina perforated by hæmostatic forceps passed down between the thumb and

cervix, as the stump is held in the palm of the left hand, a very easy manœuvre. I enlarge the vaginal rent by two short scissor-snips laterally, two short ones diagonally, and a longer one forward in the median line under the slightly separated bladder. The longitudinal median cut bleeds less than a lateral one of equal length. The cut edges of the vaginal walls are held well up by forceps, so that there need be no danger of wounding the bladder, nor of losing sight of any large vaginal artery that might possibly be severed.

The stump is then turned into the vagina, and the long ends of the ligatures given to an assistant, who draws them out of the vulva and holds them.

Instead now of putting on the clamps, I leave that as the last step, as was suggested to me by Dr. Merriman, of Chicago. The advantage of this is twofold; the peritoneal cavity is closed before I soil my hands by the vaginal manipulation, and the sewing of the peritoneum over the stump can be done nearer the surface than if it were held down rigidly by the clamps.

I then put the fingers of my left hand in the cul-de-sac of Douglas, and lift the cervix as high up toward the surface as possible, and sew the bladder-peritoneum to the posterior wall of the cervix. As this may become a difficult procedure in fleshy patients, I will give the steps in detail: I grasp with needle forceps, a short, straight needle armed with fine catgut, pierce through the bladder-peritoneum near the left stump; then through the peritoneum on the posterior surface of the cervix, and direct my assistant to tie a knot, which brings the bladder peritoneum back over the stump, while I am keeping my left hand in place under the stump, holding the intestines out of the way. Then I pierce the bladder peritoneum and cervical peritoneum again with my needle, and place an uninterrupted suture across to the other pedicle. The catgut is drawn tight and the ends tied before I remove my left hand and liberate the intestines. It is surprising what a small wound is left. In case the pelvis be deep, I

have the foot of the table raised for better light and to help keep the abdominal contents out of the way. The matter of keeping the operator's left hand steadily in place during the suturing is important, as the hand of an assistant is more in the way in a deep pelvis, and must manipulate the intestines more to keep them out of the field. If there remain any oozing, an extra catgut suture is passed so as to check it. The peritoneal cavity can now usually be closed without drainage.

The patient is then placed in the lithotomy position, the vagina opened by retractors, the clamp slipped over the stump and ligatures, oozing from the anterior wall of the cervix checked by diluted Monsel's solution, and the vagina loosely packed with iodoform gauze, to be left for three days. At the end of the fourth day the vagina is gently irrigated with plain warm water, and after that twice a day with a 1 per cent. carbolic solution.

The following modification, which I have not yet carried out, has suggested itself to me for certain cases: When considerable raw surface is left in the pelvis after the enucleation of subperitoneal fibroids, the peritoneal cavity is shut off by sewing together the torn and cut edges over the raw surfaces and over the ligatures of the broad ligament, whose long ends are brought out in the vagina. A strip of iodoform gauze is pushed into either side through the vaginal opening along the ligature so as to drain the oozing subperitoneal connective-tissue space; the gauze to be removed in three or four days, and the ligatures pulled out as they slough off. When there is much disorganization of tissue at the bottom of the pelvis, the broad-ligament stumps are liable in any case to become infected, and such infection causes less trouble when the ligatures are left long. Such infection, however, is not dangerous even when they are cut off short, as the discharge always works along the ligatures to the vaginal opening.

In a parenthetical way I would like to briefly allude to some of the dangers involved in the operation that are not

usually mentioned, and also suggest some precautionary measures.

Perhaps the greatest cause of trouble in abdominal hysterectomy comes from the handling of the intestines. Intestinal paralysis, great abdominal distention, obstruction of the bowels, peritonitis and septic peritonitis, etc., are often due to handling that could be avoided. Not a few avoidable deaths occur from this cause. The only death in this series came from it. The method I ordinarily use to prevent it is to lay a flat sponge over the intestines, and clamp the peritoneal edges of the incision to the edges of the sponge on both sides with hæmostatic forceps. This allows the wound to open wide laterally, while the abdominal cavity is kept protected down to the cervix.

In sewing up the peritoneal edges at the bottom of the pelvis the catgut sutures must be superficial in character, so as not to lead to oozing from the stitch holes, and be put so as to be as far out of reach of the sloughing stump as possible. They should also shut off the broad-ligament ligatures from the stump region, and check all bloody oozing. Vaginal arteries when severed should be tied with fine silk or catgut. In ordinary cases the strip of gauze that passes over the stump into the post-vesical space should be removed in thirty-six hours to allow the tissues to collapse after the oozing has stopped. The gauze under the stump may be left three or four days. The bladder should not be allowed to become distended during the first two or three days.

For the purpose of comparing methods, we may divide them into three varieties, viz.: the intra-peritoneal, the extra-peritoneal, and total extirpation.

The fatal objection to the intra-peritoneal variety lies in the character of the stump. It is often too large for the peritoneum to take care of safely. When reduced in size, or naturally small, its elastic character is such that it is apt to contract and allow of secondary hemorrhage; or else must be tied so tightly that sloughing is apt to occur. These difficul-

ties have proven so real in practice that even in the hands of Schroeder and Martin the operation has turned out to be a prolonged, difficult, dangerous, and unsuccessful one, and is being abandoned by the best surgeons.

Total extirpation would be ideal but for the fact that the end does not justify the means. The operation is unduly prolonged, and the intestines dangerously exposed and handled for the purpose of removing the healthy cervix, when the cervix can be rendered harmless by less heroic measures. The reputation of A. Martin, of Berlin, is so well established that I feel at liberty to criticise the operation he has performed without running any risk of criticising his skill as an operator. He has operated in this way the greatest number of times of any man, viz., thirty times, and has had eight deaths, or a mortality of 26½ per cent. Of these deaths, three were from anæmia, two from intestinal paralysis, and one from hemorrhage. These are just such causes of deaths as would result from long and difficult operations. Such a mortality in the hands of such a master can hardly encourage less experienced men to undertake it as a routine operation.

Among extra-peritoneal methods ventral fixation can in most cases be quite safely performed; but its unnatural character and the after-effects are such that even Keith, who was the most successful operator, shrank from it. The unnatural traction upon the cervix, the troublesome sloughing or necrosis following, and the frequency of subsequent hernia, have led others, as well as myself, to persistently seek for a less barbarous method, even while applauding its safety.

Vaginal fixation has seemed to me to possess most of the advantages and few of the disadvantages of the other methods. It has so far proved to be quite safe, having given a mortality in my hands of one in twenty, or 5 per cent.[1] It is as short in execution as the intra-peritoneal variety, much shorter than total extirpation, and almost as short as ventral fixation. It

[1] Up to date the mortality is one death in twenty-two, or 4½ per cent.

need involve but little exposure of intestines. It leaves the stump and cervix in a natural position, entirely below and outside the peritoneal cavity. It leaves the smallest wound-surface exposed in the peritoneal cavity of any other method. It has, like total extirpation, a safety-valve in that there is an opening at the bottom of the peritoneal cavity stitched up only by superficial catgut sutures. It preserves the portio vaginalis and vagina unmutilated. Bladder rents can be treated extra-peritoneally without displacement of the viscus or danger to the patient. It fulfils all indications. Even the necrotic stump is held off from the wounded tissues, thus obviating almost all objection to it. A reasonable objection cannot be made to the mere fact that the stump sloughs, until some method has been devised that will enable us to prevent hemorrhage from it, without causing sloughing or ulceration. Even in total extirpation we have one death in thirty from hemorrhage, and must, I suppose, have some sloughing or ulceration in the pericervical ligatures if we tie them tight enough to make sure against hemorrhage.